

IN THE SPECIFICATION

Please amend the paragraphs of the specification as follows:

Please replace paragraph [1016] with the following amended paragraph:

[1016] [[FIGs.]] FIGS. 13A and 13B are flow diagrams of a method for the home agent to reclaim resources.

Please replace paragraph [1024] with the following amended paragraph:

[1024] A system may be designed to support one or more standards such as the "TIA/EIA/IS-95-B Mobile Station-Base Station Compatibility Standard for Dual-Mode Wideband Spread Spectrum Cellular System" referred to herein as the IS-95 standard, the standard offered by a consortium named "3rd Generation Partnership Project" referred to herein as 3GPP, and embodied in a set of documents including Document Nos. 3G TS 25.211, 3G TS 25.212, 3G TS 25.213, and 3G TS 25.214, 3G TS 25.302, referred to herein as the W-CDMA standard, the standard offered by a consortium named "3rd Generation Partnership Project 2" referred to herein as 3GPP2, and TR-45.5 referred to herein as the ~~edma2000~~ CDMA2000 standard, formerly called IS-2000 MC. The standards cited hereinabove are hereby expressly incorporated herein by reference.

Please replace paragraph [1028] with the following amended paragraph:

[1028] The mobile node 102 may change its location from one network or subnetwork to another. In FIG. 1 the mobile node 102 is illustrated in [[a]] the foreign network 112. The mobile node 102 may obtain an IP address and communicate with other nodes, including the correspondent node 106, on the IP network 110 using its IP address. The mobile node 102 obtains an IP address from the home agent 104. The IP address from the home agent 104 may be referred to as a home address. The home address is a long-term IP address on the home network 114. When the mobile node 102 is visiting a foreign network 112, a "care-of" address (c/o

address) may be associated with the mobile node 102 to reflect the mobile node's current point of attachment to the IP network 110. When sending out data, the mobile node 102 typically uses its home address as the source address for IP datagrams. (A datagram is a representation of a packet of data, which typically indicates the destination of the packet as it traverses an IP network.)

Please replace paragraph [1035] with the following amended paragraph:

[1035] Terminals 206 in the coverage area may be fixed (i.e., stationary) or mobile. The mobile node 102 of FIG. 1 may be a mobile terminal 206. As shown in FIG. 2, various terminals 206 are dispersed throughout the system. Each terminal 206 communicates with at least one and possibly more base stations 204 on the downlink and uplink at any given moment depending on, for example, whether soft handoff is employed or whether the terminal is designed and operated to (concurrently or sequentially) receive multiple transmissions from multiple base stations. Soft handoff in CDMA communications systems is well known in the art and is described in detail in U.S. Patent No. 5,101,501, entitled "Method and system for providing a Soft Handoff in a CDMA Cellular Telephone ~~System~~", System," which is assigned to the assignee of the present invention.

Please replace paragraph [1038] with the following amended paragraph:

[1038] The PDSN/FA 312 receives and processes the IP data to transmit them to one or more Base Stations ~~308 (BSs)~~ (BSs) 308. As shown, each PDSN/FA 312 is in electronic communication with one or more BSs 308. Once a BS 308 receives the data, it ~~[[308]]~~ then sends the data to one or more MNs 302. An MN 302 corresponds to a mobile terminal 206 of FIG. 2. Each BS 308 may serve one or more MNs 302. Typically the BS 308 serves many MNs 302.

Please replace paragraph [1041] with the following amended paragraph:

[1041] At time t4 the home agent (HA) 104 replies by sending a registration reply message to the foreign agent (FA) 108, which forwards this message to the mobile node (MN) 102 at time t5. The registration reply message indicates to the mobile node 102 whether the home agent 104 accepted the registration or not. If the home agent 104 accepts the registration,

[[it]] the home agent 104 provides an IP address to the mobile node 102 and sends the IP address to the mobile node 102 in the registration reply message.

Please replace paragraph [1042] with the following amended paragraph:

[1042] FIG. 5 illustrates a flow diagram similar to the flow diagram of FIG. 4 with the addition that the foreign agent (FA) 108 advertises after being prompted to advertise by the mobile node (MN) 102. [[A]] The mobile node 102 may solicit an agent advertisement message by sending a solicitation message at time t1. The remaining actions illustrated in FIG. 5 are discussed in relation to FIG. 4.

Please replace paragraph [1043] with the following amended paragraph:

[1043] The Internet Control Message Protocol ("ICMP"), as defined in RFC 792 which is incorporated herein by reference, may be used in sending messages with the embodiments disclosed herein. In addition, ICMP Router Discovery, defined in RFC 1256, which is incorporated herein by reference, may be used in the discovery of an agent, ~~whether~~ a home agent 104 or a foreign agent 108.

Please replace paragraph [1045] with the following amended paragraph:

[1045] The format for the mobility agent extension which is applied to the ICMP Router Advertisement is shown in FIG. 6. The TYPE ~~field 602~~ 602 field indicates what type of extension it is. The LENGTH 604 field is the length of the extension. The LENGTH depends on the number of care-of addresses being advertised. The SEQUENCE NUMBER 606 field is used to identify the advertisement message. The LIFETIME 608 field indicates how long the information in the message is valid.

Please replace paragraph [1046] with the following amended paragraph:

[1046] The FLAGS 610 ~~field include~~ includes a number of flags to specify details about the agent, registration, etc. Currently the FLAGS are defined as follows: R indicates that registration with this foreign agent is required, B indicates that the foreign agent is busy, H indicates that the agent is a home agent, F indicates that the agent is a foreign agent, M indicates

minimal encapsulation, G indicates GRE excapsulation and V indicates Van Jacobsen header compression.

Please replace paragraph [1052] with the following amended paragraph:

[1052] FIG. 11 illustrates the routing of IP data sent by the mobile node 102 to the correspondent node 106 when the mobile node 102 is in the foreign network 112. The mobile node 102 has an established Point-to-Point Protocol (PPP) [[PPP]] connection 1102 with the foreign agent 108 and sends the IP data to the correspondent node 106 using the PPP connection 1102. In the implementation shown in FIG. 3, the PDSN/FA 312 acts as the mobile node's 302 default router and routes the IP data to the correspondent node 306.

Please replace paragraph [1055] with the following amended paragraph:

[1055] Even when the mobile node 102 is able to send a de-registration message, there may be disadvantages in sending the de-registration message. For example, if the mobile node 102 is dormant when it [[102]] decides to end the mobile IP session and send the de-registration message, the mobile node 102 would need to set up a traffic channel to end the session. Setting up a traffic channel simply to end the mobile IP session is an expensive and inefficient use of the air interface. Knowing this, users may simply power down the mobile node 102 when they no longer need to use the service.

Please replace paragraph [1059] with the following amended paragraph:

[1059] [[FIGs.]] FIGS. 13A and 13B illustrate in flow diagram form of a method 1300 for the home agent 104 to reclaim resources. The method 1300 may be triggered when the home agent 104 starts to run out of needed resources or when it becomes overloaded. Depending on what resources are being monitored by the home agent 104 and depending on the implementation of the embodiments herein, an overload condition may be defined in a variety of ways. Those skilled in the art will appreciate how to determine that a particular load on certain resources constitutes an overload condition for the home agent 104. The method 1300 of FIG. 13A is started when the home agent 104 has entered an overload condition, and the method 1300 is followed for each mobile node 102 whose INACTIVITY TIMER 1214 has expired. The home

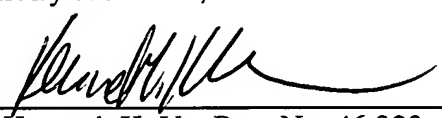
agent 104 may run the sequence of steps in parallel for each mobile node 102, it may stagger the steps for each mobile node 102, or it may sequentially iterate through each mobile node 102 whose INACTIVITY TIMER 1214 has expired thereby starting a new processing thread for that mobile node 102.

REQUEST FOR ALLOWANCE

In view of the foregoing, Applicants submit that all pending claims in the application are patentable. Accordingly, reconsideration and allowance of this application are earnestly solicited. Should any issues remain unresolved, the Examiner is encouraged to telephone the undersigned at the number provided below.

Respectfully submitted,

Dated: 04/21/2006

By: 
Kenneth K. Vu, Reg. No. 46,323
Tel. (858) 658-5106

QUALCOMM Incorporated
5775 Morehouse Drive
San Diego, California 92121
Telephone: (858) 651-4125
Facsimile: (858) 658-2502